UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,563	03/15/2001	Dennis Kornacki	6970-3	5875

21324 7590 03/20/2006

HAHN LOESER & PARKS, LLP
One GOJO Plaza
Suite 300
AKRON, OH 44311-1076

EXAMINER	
NELSON, FREDA ANN	
ART UNIT	**PAPER NUMBER**
3639	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/809,563	KORNACKI, DENNIS	
	Examiner	Art Unit	
	Freda A. Nelson	3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 6-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 6-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The amendment received on February 15, 2006 is acknowledged and entered. Claims 1, 3, 6, and 15-17 have been amended. Claims 2, and 4-5 have been canceled. No claims have been added. Claims 1, 3, and 6-17 ,are currently pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February , 2006 has been entered.

Response to Amendment and Arguments

Applicant's arguments with respect to claims 1, 3, and 6-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, and 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill et al. (US Patent Number 6,219,653), in view of "New Programs Create Optimal Truck Shipments".

As for Claim 1, O'Neill et al discloses a method comprising the steps of:
gathering physical property data about a carrier unit, said data comprising carrier unit dimensions and weight limit of said carrier unit (see col. 25, lines 31-45);
calculating a total available capacity in said carrier unit, wherein said total available capacity comprises a weight limit for said carrier unit and a volume of said carrier unit (see col. 25, lines 46-67);
storing said total available capacity in said carrier unit (see Supra column 25);
gathering a distance a first shipment is to be transported (see col. 31, lines 54 - col . 32, line 22);
gathering physical property data about said first shipment, wherein said physical property data is selected from the group consisting of (dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment, weight of said shipment, volume of said shipment, mass of said shipment, number of packages in said shipment, density of said shipment, class of said shipment) (see Supra column 25);
calculating an amount of said total available capacity to be occupied by said first shipment in said carrier unit, wherein said amount of total available capacity to be occupied by said first shipment comprises a total weight of said first shipment and a total volume to be occupied by said first shipment (see Id.);
storing said amount of said total available capacity occupied by said first shipment in said carrier unit (see Supra column 25);
calculating remaining available capacity in said carrier unit after said first shipment is optimally loaded in said carrier unit (see Supra column 25);
storing said remaining available capacity in said carrier unit (see Id.); and
determining a rate to be charged for said first shipment based upon said amount of said total available capacity occupied by said first shipment in said carrier unit and said distance said first shipment is to be transported (see Figs. 15A-C and the descriptions thereof);
storing said rate in said memory of said processing system (see Id.);
calculating a total charge for transporting said first shipment (see col. Supra column 31 and col . 32, line 59 - col . 33, line 7); and
displaying said total charge (see Supra Figs. 15A-C).
O'Neill et al do not expressly disclose automatically determining an optimal spatial orientation of one or more packages of said first shipment relative to each other and to said carrier unit available capacity using said processing system; and storing said optimal spatial orientation of said one or more packages of said first shipment in

said memory of said processing system. "New Programs Create Optimal Truck Shipments" discloses that TCE implemented Virtual Loader from Solution Dynamics Inc wherein this on-line load planning system sizes shipping containers--usually truck trailers--before warehouse personnel even see physical product. Then it displays a three-dimensional layout of how to load the container best (Page 2); and a recently announced truck scheduling module from ROI Systems Inc., developer of the Manage 2000 ERP system, can assign orders to trucks, optimize truck loads based on cube or weight, and generate pick loads in reverse stop sequence. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of O'Neill et al. to include the feature of "New Programs Create Optimal Truck Shipments" in order to provide the user with a display of an optimized load.

As for Claim 3, O'Neill et al. further disclose the method, including: gathering a distance a second shipment is to be transported (see Supra gathering the distance in Claim 1);

gathering physical property data about said second shipment, wherein said physical property data is selected from the group consisting of: dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment, weight of said shipment, volume of said shipment, mass of said shipment, number of packages in said shipment, density of said shipment, class of said shipment) (see Supra column 25);

calculating an amount of said total available capacity to be occupied by said second shipment in said carrier unit, wherein said amount of total available capacity to be occupied by said second shipment comprises a total weight of said second shipment and a total volume to be occupied by said second shipment (see Id.);

storing said amount of said total available capacity occupied by said second shipment in said carrier unit (see Supra Claim 1);

calculating remaining available capacity in said carrier unit after said second shipment is loaded in said carrier unit (see Id.);

storing said remaining capacity in said carrier unit (see Id.);

determining a rate to be charged for said second shipment based upon said amount of said total available capacity occupied by said second shipment in said carrier unit and said distance said second shipment is to be transported (see Supra columns 25, 26, 31 , 32);

storing said rate (see Id.);

calculating a total charge for transporting said second shipment (see Supra columns 31 , 32); and

displaying said total charge (see Supra Figs).

O'Neill et al do not expressly disclose automatically determining an optimal spatial orientation of one or more packages of said first shipment relative to each other and to said carrier unit available capacity using said processing system; and storing said optimal spatial orientation of said one or more packages of said first shipment in

said memory of said processing system. "New Programs Create Optimal Truck Shipments" discloses that TCE implemented Virtual Loader from Solution Dynamics Inc wherein this on-line load planning system sizes shipping containers--usually truck trailers--before warehouse personnel even see physical product. Then it displays a three-dimensional layout of how to load the container best (Page 2); and a recently announced truck scheduling module from ROI Systems Inc., developer of the Manage 2000 ERP system, can assign orders to trucks, optimize truck loads based on cube or weight, and generate pick loads in reverse stop sequence. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of O'Neill et al. to include the feature of "New Programs Create Optimal Truck Shipments" in order to provide the user with a display of an optimized load.

As for Claim 6, O'Neill et al. further discloses the method, wherein said step of determining a rate to be charged for said shipment comprises: calculating a fair price for transporting a shipment having substantially similar physical properties to said first shipment (col. 27, line 55 - col. 28, line 26).

As for Claim 7, O'Neill et al. further discloses the method, wherein said step of calculating a total charge for transporting said first shipment comprises: calculating a total density capacity of said carrier unit by dividing said weight limit of said carrier unit by said volume of said carrier unit (see Fig. 13F and Supra col. 25);

calculating a volume of said first shipment (see Id.);

calculating a density of said first shipment (divide the weight by the volume;

computing a first cube charge calculation value by dividing said rate by said total density capacity (see Supra column 25);

computing a second cube charge calculation value by dividing the product of the volume of said carrier unit multiplied by the total density capacity of said carrier unit by a density of said first shipment (repeating the previous step;

calculating a third cube charge computation value by dividing said first cube charge computation value by said second cube charge computation value; and

multiplying said third cube charge computation value by a number of miles said first shipment is to be transported, the density of said first shipment and the volume of said first shipment (see Figs. 13A-F, 15A-C).

As for Claim 8, O'Neill et al. further discloses the method, wherein said step of calculating a total charge for transporting said first shipment comprises: determining a total length of said first shipment (see Supra column 25);

determining a total length of said carrier unit (see Id.);

dividing said rate by said length of said carrier unit; and

multiplying the product of said rate divided by said total length of said carrier unit by said distance said first shipment is to be transported and a length of said first shipment (see Fig. 13F and Supra columns 25-26).

As for Claim 9, O'Neill et al. further discloses the method, wherein the step of calculating a total charge includes: calculating a volume of said shipment (see Supra columns 25, 26);

calculating a density of said first shipment (see Id.);

calculating a density class of said shipment (see Id.);

calculating a total density capacity of said carrier unit by dividing the weight limit of said carrier unit by the volume of said carrier unit (by utilizing the Load Balance Indicators in Fig. 1 3F);

computing a first class charge calculation value by dividing the product of the rate divided by said total density capacity of said carrier unit by said volume of said carrier unit (see Figs. 13A-F);

computing a second class charge calculation value by dividing the total density capacity of said carrier unit by said density of said first shipment (see Id.); and

multiplying said first class charge calculation value, said second class charge computation value, said distance said first shipment is to be transported, said class density value and said volume of said shipment (see Figs. 13A-F, 15A-C).

As for Claim 10, O'Neill et al. further discloses the method, wherein said step of calculating a total charge for transporting said first shipment comprises: determining a total weight of said first shipment (see Supra columns 25, 26);

determining a total volume of said first shipment (see Id.);

calculating a density of said first shipment (see Fig. 13F);

dividing said rate by the product of said shipment density multiplied by the shipment volume to calculate a weight charge value; and

multiplying said weight charge value by said total weight of said first shipment and said distance said first shipment will be transported (see Figs. 13A-F, 15A-C and the Supra columns 25-6, 31, 32).

As for Claim 11, O'Neill et al. discloses a data processing system comprising: a computing device and a display (see Supra Figs.);

means for entering information (see the input device in 2) about a carrier unit said information comprising one or more members of the group consisting of dimensions of said carrier unit, weight
capacity of said carrier unit, density capacity of said carrier unit; and length of said carrier unit;

means for calculating (the processor in the computer system in Fig. 2) a total volume and a weight capacity of said carrier unit based on said entered information about said carrier unit;

means for storing (the computer system in Fig. 2 MUST have the storage for the data) said total volume and said weight capacity of said carrier unit;

means for displaying (the monitor) said total volume and said weight capacity of said carrier unit;

means for entering a distance a first shipment is to be transported (see Supra input device);

means for entering information about said first shipment, said information comprising one or more members of the following: dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment', volume of said shipment, weight of said shipment, mass of said shipment, density of said shipment, number of packages in said shipment', and class of said shipment (see Id.);

means for determining a value for said first shipment of a volume of said first shipment, a density of said first shipment, a total weight of said first shipment, and total length of said first shipment based on said information entered about said first shipment (see Figs. 2, 13A-F, 1 5A-C);

means for storing said values of said volume of said first shipment, said density of said first shipment, said total weight of said first shipment, and said total length of said first shipment based on said information entered about said first shipment (see Supra database);

means for displaying said calculated values for said first shipment (see Supra monitor);

means for determining the optimal orientation of one or more packages in said first shipment relative to said carrier unit (col. 3, lines 23-44);

means for storing said optimal orientation of said one or more packages in said first shipment (see Supra database);

means for displaying said optimal orientation of said one or more packages in said first shipment (see Supra monitor);

means for determining an amount of carrier unit total area occupied by said first shipment and a portion of weight capacity occupied by said first shipment (see Supra processor);

means for storing said amount of carrier unit area occupied by said first shipment and said portion of weight capacity occupied by said first shipment (see Fig.2 and Supra database); and

means for displaying said amount of carrier unit area and said portion of weight capacity occupied by said first shipment (see Fig. 2 and Supra monitor).

As for Claim 12, O'Neill et al. further discloses the data processing system including: means for entering a distance said second shipment is to be transported (see Supra input device in Fig. 2);

means for entering information about a second shipment, said information comprising at least one member of the following: dimensions of one package in said shipment, volume of one package in said shipment, weight of one package in said shipment, mass of one package in said shipment, dimensions of said shipment', volume of said shipment, weight of said shipment, mass of said shipment, density of said shipment, number of packages in said shipment and class of said shipment (see 1d.);

means for calculating values for a volume of said second shipment, a density of said second shipment, a total weight of said second shipment, and a total length of said second shipment (see Supra processor);

means for storing said values of said volume of said second shipment, said density of said second shipment, said total weight of said second shipment, and said total length of said second shipment (see Supra database);

means for displaying said values for said second shipment (see Fig. 2 for Supra monitor);

means for determining the optimal orientation of one or more packages in said second shipment relative to said carrier unit and relative to said first shipment (see Supra processor);

means for storing said optimal orientation of said one or more packages in said second shipment (see Supra database);

means for displaying said optimal orientation of said one or more packages in said second shipment (see Supra Monitor);

means for determining an amount of carrier unit total area occupied by said second shipment and a portion of weight capacity occupied by said second shipment (see Supra processor); and

means for storing said amount of carrier unit area occupied by said second shipment and said portion of weight capacity occupied by said second shipment (see Supra database); and

means for displaying said amount of carrier unit area and said portion of weight capacity occupied by said second shipment (see Supra monitor).

As for Claim 13, O'Neill et al. further discloses the data processing system including: means for calculating charges for transporting said first shipment (see Supra processor).

As for Claim 14, O'Neill et al. further discloses the data processing system, wherein said means for calculating said charges for transporting said first shipment comprises: means for entering a rate to be charged based on said distance said first shipment is to be transported and at least one physical property of said shipment (see Supra input device in Fig. 2);

application for recalling at least one member of the following group: total volume occupied by said first shipment, total weight of said first shipment, total length of said first shipment or class of said first shipment (see Supra Figs. 13A-F, 15A-C for the applications); and

application for recalling said total available capacity of said carrier unit (see Id.);

application for recalling said distance that said first shipment is to be transported (see Id.); and

application for calculating charges for transporting said shipment relative to said total capacity of said carrier unit based on said distance and at least one member of the following: total volume occupied by said shipment, total weight of said shipment, total

length of said shipment and class of said shipment (see Supra Figs. for the applications).

As for Claim 15, O'Neill et al. discloses a computer program product comprising: a computer usable medium having computer readable program code means embodied in said medium for determining available capacity in a carrier unit (see Fig. 13F and col. 25, lines 31-67);

the computer usable medium having computer readable program code means embodied in said medium for determining an amount of space to be occupied by a first shipment in said carrier unit (see Id.);

the computer usable medium having computer readable program code means embodied in said medium for determining an optimal orientation for said first shipment in said carrier unit (see Figs. 15A-C and 1 7-18; col. 12, lines 23-44; and col. 31 , line 64 - col. 32, line 22);

the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said second shipment is loaded onto said carrier unit (see Supra column 25);

the computer usable medium having computer readable program code means embodied in said medium for storing said available capacity of said carrier unit, said amount of space to be occupied by said first shipment in said carrier unit, said remaining space in said carrier unit after said first shipment is Loaded into said carrier unit, and said optimal orientation of said first shipment in said carrier unit (see Fig.13F for the Load Balance Indicators); and

the computer usable medium having computer readable program code means embodied in said medium for determining whether additional packages can be added to said carrier unit (see Fig.13F for the Load Balance Indicators).

As for Claim 16, O'Neill et al. further discloses the computer program product including: the computer usable medium having computer readable program code means embodied in said medium for determining an amount of space to be occupied by a second shipment in said carrier unit (see col. 25, lines 31-67);

the computer usable medium having computer readable program code means embodied in said medium for determining an optimal orientation for said second shipment in said carrier unit relative to said first shipment (see Supra columns 31, 32);

the computer usable medium having computer readable program code means embodied in said medium for determining remaining capacity in said carrier unit, when said code means for determining said remaining capacity in said carrier unit is executed on said data processing system, after said second shipment is loaded onto said carrier unit (see Id.);

the computer usable medium having computer readable program code means embodied in said medium for storing said amount of space to be occupied by said

second shipment in said carrier unit, said remaining space in said carrier unit after said second shipment is loaded into said carrier unit, and said optimal orientation of second shipment in said carrier unit (see Supra Fig. 13F for the Load Balance Indicators); and

the computer usable medium having computer readable program code means embodied in said medium for determining whether additional packages can be added to said carrier unit (see Supra Fig. 13F for the Load Balance Indicators).

As for Claim 17, O'Neill et al. further discloses the computer program product including: a computer usable medium having computer readable program code means embodied in said medium for entering a rate to be charged based on said distance at least one physical property of said first shipment (see Supra Figs. 13 and 15s for the GUI to enter any input);

the computer usable medium having computer readable program code means embodied in said medium for determining at least one member of the following group a total volume occupied by said first shipment, a total weight occupied by said first shipment, a total length of said first shipment or a class of said first shipment (see Supra columns); and

the computer usable medium having computer readable program code means embodied in said medium for calculating charges for transporting said shipment relative to said total capacity of said carrier unit based on said distance and at least one member of the following: total volume occupied by said shipment, total weight of said shipment, total length of said shipment and class of said shipment (see Supra Figs. 15A-C and col. 31 , line 64 - col. 32, line 22).

Conclusion

The examiner has cited prior art of interest, for example:

1) Hunt et al. (US Patent Number 5,835,716), which disclose a method and system for brokering excess carrier capacity.

2) Kooy et al. (US Patent Number 3,705,410), which disclose and automated method for optimizing utilization of warehouse storage space.

3) "Emergency Space", Mar 1996, Transportation & Distribution, v37n3 PP: 60.

4) McGovern, J Michael, "Load Management Software", Mar 1999, Transportation & Distribution, v40n3 PP: 29-32.

5) "Load Plans Make Room for Profits", March 1996, Transportation & Distribution, p 58.

6) Andel, Tom; "Software helps you take loads off your fleet", July 1991, Transportaion & Distribution, v32, n7, p39(4).

7) Gooley, Toby B.; "Load Planning Made Easy", Mar 1994, Traffic Management, V33, n3, p57(3).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda A. Nelson whose telephone number is (571) 272-7076. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FAN 03/11/2006

JOHN W. HAYES
SUPERVISORY PATENT EXAMINER